

FIG. 1

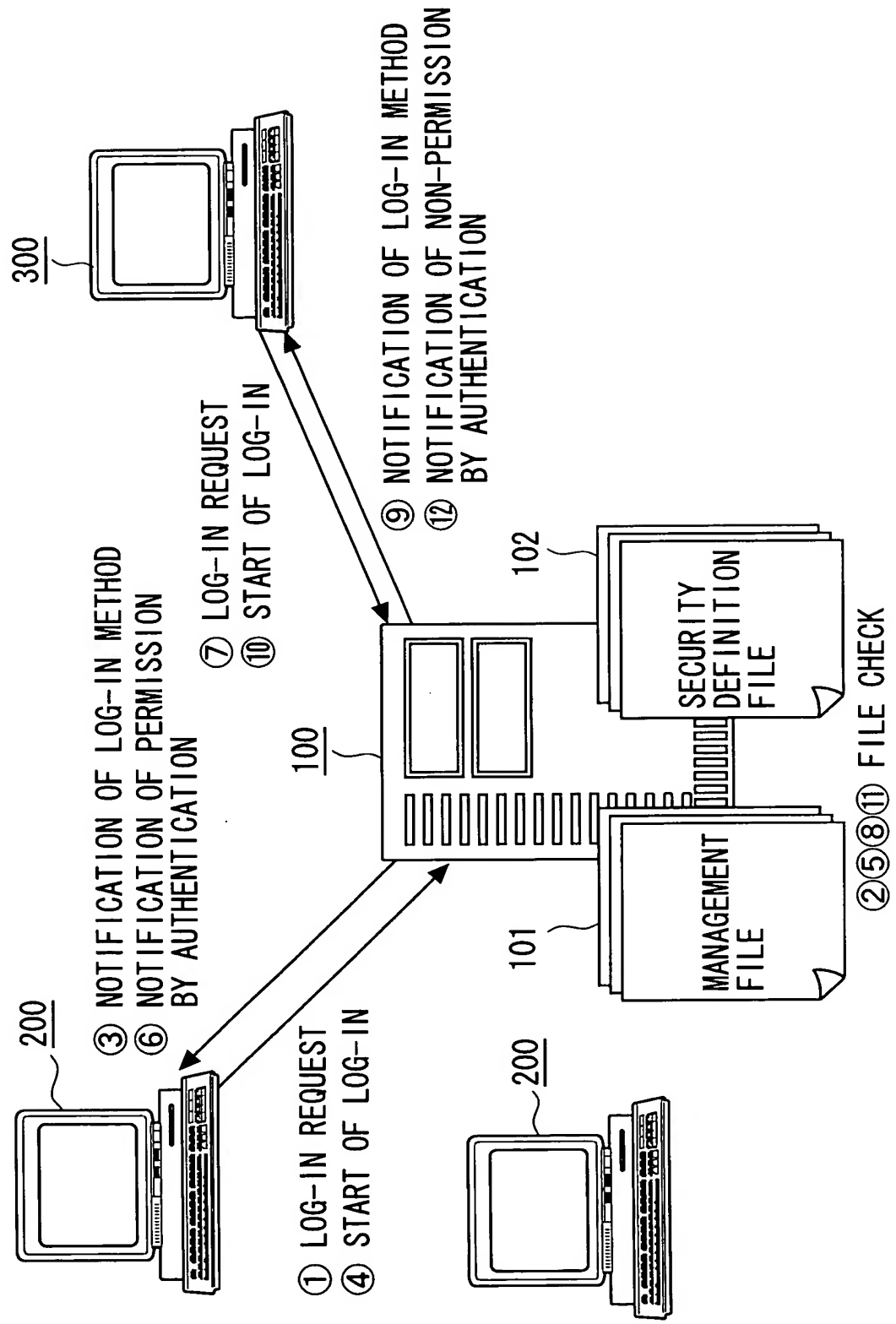


FIG. 2

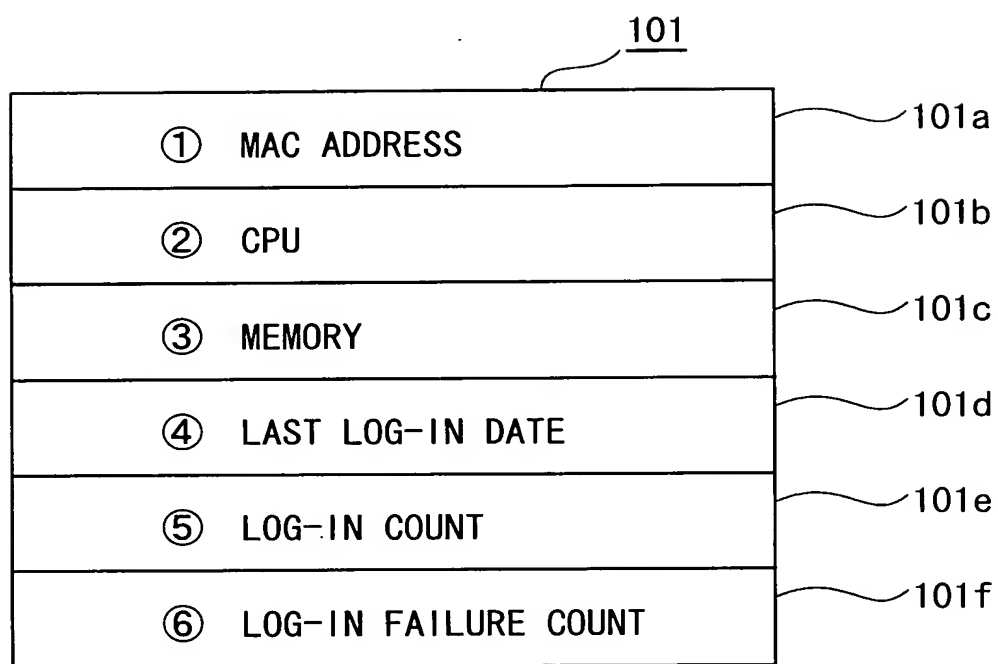


FIG. 3

ACCUMULATED LOG-IN COUNT	LEVEL	LOG-IN PROCEDURE
1-2	5	LOG-IN PROCEDURE OF LEVEL 5
3-5	4	LOG-IN PROCEDURE OF LEVEL 4
6-10	3	LOG-IN PROCEDURE OF LEVEL 3
11-20	2	LOG-IN PROCEDURE OF LEVEL 2
21	1	LOG-IN PROCEDURE OF LEVEL 1

FIG. 4

NUMBER OF ELAPSED DAYS	LEVEL	LOG-IN PROCEDURE
21-	5	LOG-IN METHOD OF LEVEL 5
11-20	4	LOG-IN METHOD OF LEVEL 4
6-10	3	LOG-IN METHOD OF LEVEL 3
3-5	2	LOG-IN METHOD OF LEVEL 2
1-2	1	LOG-IN METHOD OF LEVEL 1

FIG. 5

102c

FAILURE COUNT	SECURITY LEVEL
0-3	PRESENT LEVEL MAINTAINED
4	PRESENT LEVEL + 1
5	PRESENT LEVEL + 2
6	PRESENT LEVEL + 3
7-	PRESENT LEVEL + 4

FIG. 6

<u>SECURITY</u>	<u>LOG-IN METHOD</u>	<u>LOG-IN COUNT</u>
LEVEL 5	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION, SMART CARD, BUTTON PRESSING PERIOD	1~2
LEVEL 4	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION, SMART CARD	3~5
LEVEL 3	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION	6~10
LEVEL 2	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD	11~20
LEVEL 1	INPUTTING OF USER NAME AND PASSWORD	21 OR ABOVE

FIG. 7

1a

MANAGEMENT SYSTEM (1/5)

INPUT USER NAME AND PASSWORD

USER NAME:

PASSWORD:

NEXT

CANCEL

FIG. 8

1b

WORK HOURS MANAGEMENT SYSTEM (2/5)

INPUT KEYWORD TO QUESTION

FAVORITE ANIMAL ?

KEYWORD:

RETURN

NEXT

CANCEL

FIG. 9

1c

WORK HOURS MANAGEMENT SYSTEM (3/5)

PERFORM FINGERPRINT AUTHENTICATION.
TOUCH YOUR THUMB OF RIGHT HAND ON SOCKET

RETURN NEXT CANCEL

FIG. 10

1d

WORK HOURS MANAGEMENT SYSTEM (4/5)

INSERT YOUR SMART CARD.

RETURN

NEXT

CANCEL

FIG. 11

1e

WORK HOURS MANAGEMENT SYSTEM (5/5)

PRESS END BUTTON FOR DESIGNATED TIME.

RETURN END CANCEL

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graph TD
    PC[PC 200] -- "REQUEST LOG-IN S101" --> S101
    S101 -- "NOTIFY OF MACHINE INFORMATION" --> PC
    PC -- "INPUT LOG-IN PROCEDURE S104" --> S104
    S104 --> S102
    S102 --> S103
    S103 --> S105
    S105 -- YES --> S106
    S105 -- NO --> S107
    S106 --> S108
    S107 --> S108
    S108 -- YES --> S109
    S108 -- NO --> RELOG[RE-LOG IN]
    S109 --> S110[NOTIFY OF PERMISSION OF LOG-IN]
    RELOG --> S110
    S110 --> S104
    S110 --> S111[START OF OPERATION]
    S101 -.-> MFILE[MANAGEMENT FILE 101]
    S102 -.-> SDEF[SECURITY DEFINITION FILE 102]
    S103 -.-> SDEF
    S105 -.-> SDEF
    S106 -.-> SDEF
    S107 -.-> SDEF
    S108 -.-> SDEF
    S109 -.-> SDEF
    S110 -.-> SDEF
    S111 -.-> SDEF
    
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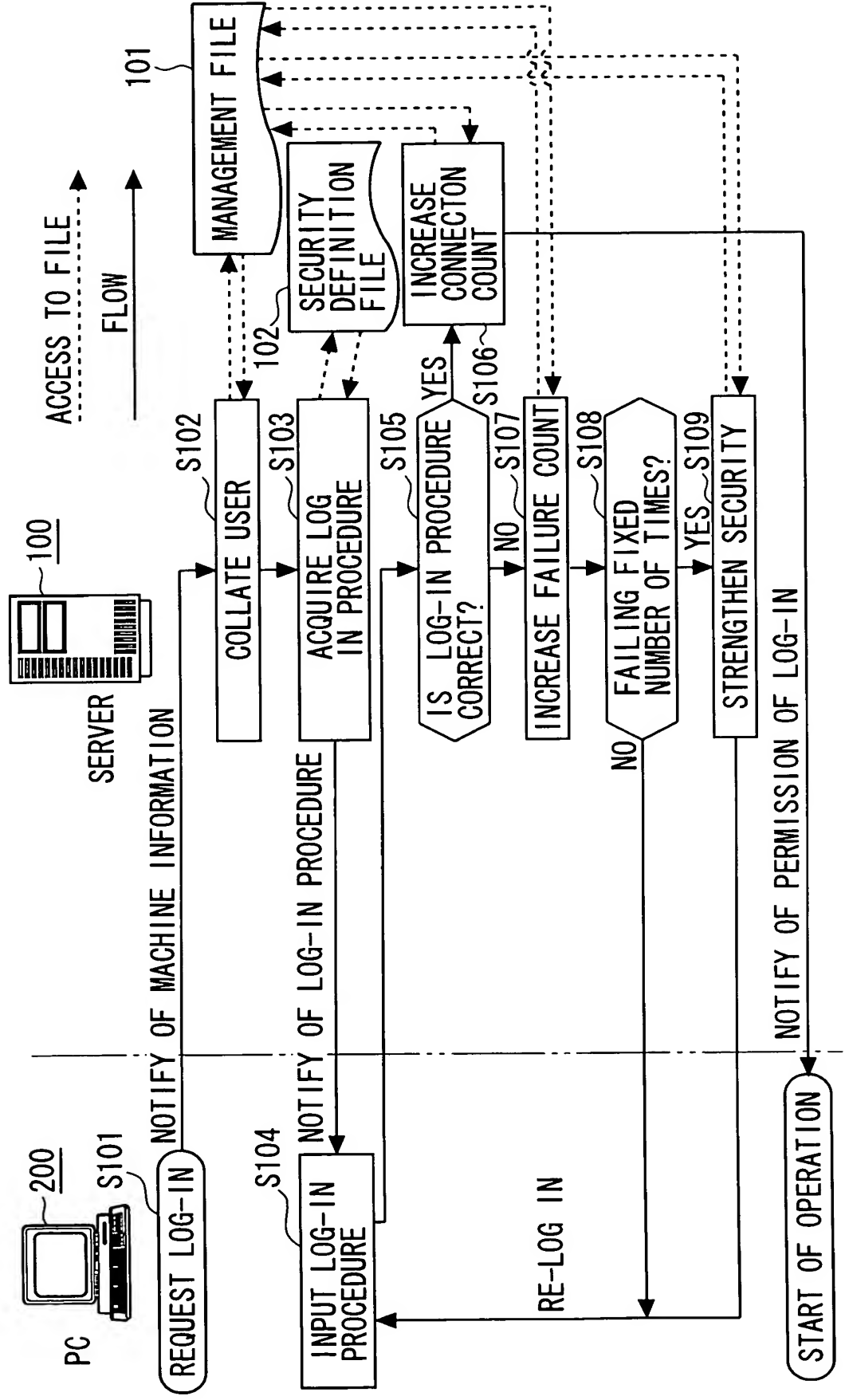


FIG. 13

<u>SECURITY</u>	<u>LOG-IN METHOD</u>	<u>LOG-IN COUNT</u>
LEVEL 5	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION, SMART CARD, BUTTON PRESSING PERIOD	21 OR ABOVE
LEVEL 4	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION, SMART CARD	11~20
LEVEL 3	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD, FINGERPRINT AUTHENTICATION	6~10
LEVEL 2	INPUTTING OF USER NAME AND PASSWORD, INPUTTING OF KEYWORD	3~5
LEVEL 1	INPUTTING OF USER NAME AND PASSWORD	1~2